

33.

Atty. Dkt. No. 072827-0372

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Alan L. Mueller, et al.

Title: Compounds Active at a Novel Site
on Receptor-Operated Calcium
Channels Useful for Treatment of
Neurological Disorders and
Diseases

Appl. No.: 10/797,355

Filing Date: March 9, 2004

Examiner: A. Pryor

Art Unit: 1616

CERTIFICATE OF FACSIMILE TRANSMISSION
I hereby certify that this paper is being facsimile transmitted to the United States Patent and Trademark Office, Alexandria, Virginia on the date below.
DIANE GARCIA (Printed Name)
<i>Diane Garcia</i> (Signature)
July 26, 2005 (Date of Deposit)

TERMINAL DISCLAIMER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Your Petitioner, NPS Pharmaceuticals, Inc., having its principal place of business at 383 Colorow Drive Way, Salt Lake City, Utah 84108, represents that it is the owner of the entire right, title, and interest in and to U.S. Patent Application Serial No. 10/797,355, filed 2/23/2004, which is a continuation of co-pending U.S. Application No. 09/825,373 filed on April 2, 2001; which is a continuation of U.S. Application No. 09/186,341 filed November 4, 1998, now U.S. Patent No. 6,211,245; which is a continuation of U.S. Application No. 08/873,011, filed June 11, 1997, now abandoned; which is a continuation-in-part of U.S. Application No. 08/869,154, filed June 4, 1997, now abandoned; which is a continuation-in-part of U.S. Application No. 08/763,480, filed December 11, 1996, now U.S. Patent No. 6,017,965; which is a continuation-in-part of U.S. Application Ser. No. 08/663,013, filed June 7, 1996, now abandoned; which is a continuation-in-part of U.S. Application Ser. No. 08/485,038, filed June 7,

07/29/2005 CCHAU1 00000001 500872 10797355

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34.

Atty. Dkt. No. 072827-0372

1995, now U.S. Patent No. 6,071,970; which is a continuation-in-part and a National Stage application of International Patent Application No. PCT/US94/12293 (WO 95/21612), filed October 26, 1994 and designating the United States; which is a continuation-in-part of U.S. Application Serial No. 08/288,668, filed August 9, 1994, now abandoned; which is a continuation-in-part of U.S. Application Ser. No. 08/194,210, filed February 8, 1994, now abandoned, all by virtue of an Assignment recorded on July 22, 1993 on Reel/Frame 6697/0470 with the United States Patent and Trademark Office Assignment Division, a copy of which is attached hereto as APPENDIX A; and which is a continuation-in-part of U.S. Serial No. 08/014,813, filed February 8, 1993, now abandoned, by virtue of an assignment recorded on June 17, 1994 on Reel/Frame 7007/0967, with the United States Patent and Trademark Office Assignment Division, a copy of which is also attached hereto as APPENDIX A.

Further, your Petitioner represents that it is the owner of U.S. Patent No. 6,750,244, which issued on June 15, 2004 (formerly U.S. Patent Application No. 09/825,373, filed April 2, 2001), which is a continuation of U.S. Application No. 09/186,341 filed November 4, 1998, now U.S. Patent No. 6,211,245; which is a continuation of U.S. Application No. 08/873,011, filed June 11, 1997, now abandoned; which is a continuation-in-part of U.S. Application No. 08/869,154, filed June 4, 1997, now abandoned; which is a continuation-in-part of U.S. Application No. 08/763,480, filed December 11, 1996, now U.S. Patent No. 6,017,965; which is a continuation-in-part of U.S. Application Ser. No. 08/663,013, filed June 7, 1996, now abandoned; which is a continuation-in-part of U.S. Application Ser. No. 08/485,038, filed June 7, 1995, now U.S. Patent No. 6,071,970; which is a continuation-in-part and a National Stage application of International Patent Application No. PCT/US94/12293 (WO 95/21612), filed October 26, 1994 and designating the United States; which is a continuation-in-part of U.S. Application Serial No. 08/288,668, filed August 9, 1994, now abandoned; which is a continuation-in-part of U.S. Application Ser. No. 08/194,210, filed February 8, 1994, now abandoned, all by virtue of an Assignment recorded on July 22, 1993 on Reel/Frame 6697/0470 with the United States Patent and Trademark Office Assignment Division, a copy of which is attached hereto as APPENDIX A; and which is a continuation-in-part of U.S. Serial No.

35.

Atty. Dkt. No. 072827-0372

08/014,813, filed February 8, 1993, now abandoned, by virtue of an assignment recorded on June 17, 1994 on Reel/Frame 7007/0967, with the United States Patent and Trademark Office Assignment Division, a copy of which is also attached hereto as APPENDIX A.

Your Petitioner, NPS Pharmaceuticals, Inc., hereby disclaims the terminal part of the term of any patent granted on the above identified patent application which would extend beyond the full statutory term, as presently shortened by any terminal disclaimer, of U.S. Patent No. 6,750,244, and hereby agrees that any patent so granted on the above identified patent application shall be enforceable only for and during such period that the legal title to U.S. Patent No. 6,750,244 shall be the same as the legal title to any patent granted on the above identified patent application, this agreement to run with any patent granted on the above identified patent application and to be binding upon the grantee, its successors or assigns.

In making the above disclaimer, Petitioner does not disclaim any terminal part of any patent granted on the above identified patent application, prior to the full statutory term of U.S. Patent No. 6,750,244 as defined in 35 U.S.C. §§154-156 and 173, in the event that U.S. Patent No. 6,750,244 expires for failure to pay a maintenance fee, is held unenforceable or is found invalid in a final judgment by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR §1.321(a), has all claims canceled by a reexamination certificate or as a result of an interference proceeding, or is otherwise not deemed to provide the rights conveyed by 35 USC §154, prior to the full statutory term of U.S. Patent 6,750,244 as defined in 35 USC §§154-156 and 173, except for the separation of legal title stated above. Further, Petitioner does not disclaim any terminal part of a patent granted on the above identified patent application that would extend beyond the present termination of U.S. Patent 6,750,244, in the event that such present term is extended by virtue of compliance with the conditions for term extension of any present or future patent term extension provisions of the patent law, including but not limited to 35 U.S.C. §§155, 155A or 156, and without waiving Petitioner's right to extend the term of a patent granted on the above identified patent application to the extent provided by law.

36

Atty. Dkt. No. 072827-0372

The undersigned, being the Attorney of Record for the above identified patent application, and duly authorized to act on behalf of Petitioner, certifies that he has reviewed the Assignments attached as APPENDIX A , and to the best of his knowledge and belief, legal title to the above identified patent application and U.S. Patent No. 6,750,244 rests with Petitioners, NPS Pharmaceuticals, Inc.. The undersigned declares that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-identified application or any patent issuing there from.

Respectfully submitted,

Date

July 26, 2005

FOLEY & LARDNER LLP

Customer No. 33588

Telephone: 858-847-6700

Facsimile: 858-792-6773

By

Barry S. Wilson

Barry S. Wilson

Attorney for Applicant

Registration No. 39,431



US006750244B2

(12) **United States Patent**
Mueller et al.

(10) Patent No.: **US 6,750,244 B2**
(45) Date of Patent: **Jun. 15, 2004**

(54) **COMPOUNDS ACTIVE AT A NOVEL SITE ON RECEPTOR-OPERATED CALCIUM CHANNELS USEFUL FOR TREATMENT OF NEUROLOGICAL DISORDERS AND DISEASES**

(75) Inventors: Alan L. Mueller, Salt Lake City, UT (US); Scott T. Moe, Salt Lake City, UT (US)

(73) Assignee: NPS Pharmaceuticals, Inc., Salt Lake City, UT (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/825,373

(22) Filed: Apr 2, 2001

(65) **Prior Publication Data**

US 2002/0004522 A1 Jan. 10, 2002

Related U.S. Application Data

(63) Continuation of application No. 09/186,341, filed on Nov. 4, 1998, now Pat. No. 6,211,245, and a continuation of application No. 08/873,011, filed on Jun. 11, 1997, now abandoned, which is a continuation-in-part of application No. 08/763,480, filed on Dec. 11, 1996, now Pat. No. 6,017,965, which is a continuation-in-part of application No. 08/663,013, filed on Jun. 7, 1996, now abandoned, which is a continuation-in-part of application No. 08/485,038, filed on Jun. 7, 1995, now Pat. No. 6,071,970, which is a continuation-in-part of application No. PCT/US94/12293, filed on Oct. 26, 1994, which is a continuation-in-part of application No. 08/268,688, filed on Aug. 9, 1994, now abandoned, which is a continuation-in-part of application No. 08/194,210, filed on Feb. 8, 1994, now abandoned, which is a continuation-in-part of application No. 08/014,813, filed on Feb. 8, 1993, now abandoned.

(51) Int. Cl.⁷ A61K 31/353; A61K 31/387; C07D 311/04; C07D 335/12
(52) U.S. CL 514/431; 514/437; 514/450; 514/454; 549/12; 549/26; 549/354; 549/388
(58) Field of Search 549/388, 12, 26, 549/354; 514/454, 431, 437, 450

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(List continued on next page.)

Primary Examiner—Richard L. Raymond
(74) Attorney, Agent, or Firm—Foley & Lardner

(57) **ABSTRACT**

Method and compositions for treating a patient having a neurological disease or disorder, such as stroke, head trauma, spinal cord injury, spinal cord ischemia, ischemia or hypoxia-induced nerve cell damage, epilepsy, anxiety, neuropsychiatric or cognitive deficits due to ischemia or hypoxia such as those that frequently occur as a consequence of cardiac surgery under cardiopulmonary bypass, or neurodegenerative diseases such as Alzheimer's Disease, Huntington's Disease, Parkinson's Disease, or amyotrophic lateral sclerosis (ALS).

5 Claims, No Drawings

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38. NO. 1757 P. 39

APPENDIX A

XXXXXXX.XA



39.
UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

DATE: 07/05/94
TO:

N05A

RICHARD J. WARBURG
SAN DIEGO OFFICE
611 WEST SIXTH STREET
SUITE 3400
LOS ANGELES, CA 90017

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ASSIGNOR: MUELLER, ALAN L. DOC DATE: 04/15/94

ASSIGNOR: VANWAGENEN, BRADFORD C. DOC DATE: 04/27/94

ASSIGNOR: DELMAR, ERIC G. DOC DATE: 04/27/94

ASSIGNOR: BALANDRIN, MANUEL F. DOC DATE: 04/15/94

ASSIGNOR: MOE, SCOTT T. DOC DATE: 04/15/94

ASSIGNOR: ARTMAN, LINDA D. DOC DATE: 04/27/94

RECORDATION DATE: 06/17/94 NUMBER OF PAGES 005 REEL/FRAME 7007/0967

DIGEST : ASSIGNMENT OF ASSIGNORS INTEREST

ASSIGNEE:
NPS PHARMACEUTICALS, INC.
420 CHIPETA WAY
SUITE 240
SALT LAKE CITY, UT 84108

JUL. 26. 2005 4:55PM

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40. NO. 1757 P. 41

7007/0967 PAGE 0002

SERIAL NUMBER 8-194210

FILING DATE 02/08/94

PATENT NUMBER

ISSUE DATE 00/00/00

margaret LaSalle

EXAMINER/PARALEGAL

ASSIGNMENT BRANCH

ASSIGNMENT/CERTIFICATION SERVICES DIVISION

ASSIGNMENT

For valuable consideration, we, Alan L. Mueller of Salt Lake City, Utah;
Bradford C. VanWagenen of Salt Lake City, Utah; Eric G. Delmar of Salt Lake City, Utah;
Manuel F. Balandrin of Sandy, Utah; Scott T. Moe of Salt Lake City, Utah; and Linda D.
Artman of Salt Lake City, Utah hereby assign to NPS PHARMACEUTICALS, INC., a
Delaware corporation having a place of business at Salt Lake City, Utah, and its successors
 and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest
 throughout the world in the inventions and improvements which are the subject of an
 application for United States Patent, Serial No. 08/194,210, filed on February 8, 1994
 entitled COMPOUNDS ACTIVE AT A NOVEL SITE ON RECEPTOR OPERATED
CALCIUM CHANNELS USEFUL FOR TREATMENT OF NEUROLOGICAL
DISORDERS AND DISEASES, this assignment including said application, and any and all
 United States and foreign patents granted for any of said inventions or improvements, and
 the right to claim priority based on the filing date of said application under the International
 Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the
 European Patent Convention, and all other treaties of like purposes; and we authorize the
 Assignee to apply in all countries in our names or in its own name for patents and like rights
 of exclusion and for inventor's certificates for said inventions and improvements; and we
 agree for ourselves and our respective heirs, legal representatives and assigns, without further
 compensation to perform such lawful acts and to sign such further applications, assignments,
 Preliminary Statements and other lawful documents as the Assignee may reasonably request
 to effectuate fully this assignment.

IN WITNESS WHEREOF, I hereto set my hand and seal at Salt Lake City, Utah, this
15th day of April, 1994.

Alan L. Mueller L.S.
 FIRST MIDDLE LAST

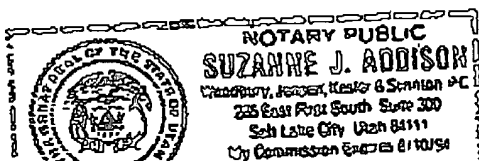
State of Utah :

SS.

County of Salt Lake :

Before me this 15th day of April, 1994, personally appeared

Alan L. Mueller known to me to be the person whose name is subscribed
 to the foregoing Assignment and acknowledged that he executed the same as his free act and
 deed for the purposes therein contained.



Suzanne J. Addison
 Notary Public

Patent

IN WITNESS WHEREOF, I hereto set my hand and seal at Salt Lake City, Utah, this
27th day of April, 1994.

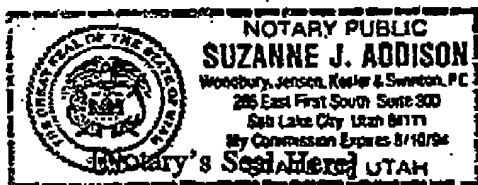
Bradford C. Van Wagenen L.S.
 FIRST MIDDLE LAST

State of Utah :

SS.

County of Salt Lake :

Before me this 27th day of April, 1994, personally appeared
Bradford C. Van Wagenen known to me to be the person whose name is subscribed
 to the foregoing Assignment and acknowledged that he executed the same as his free act and
 deed for the purposes therein contained.



Suzanne J. Addison
 Notary Public

My commission expires:

8/21/94

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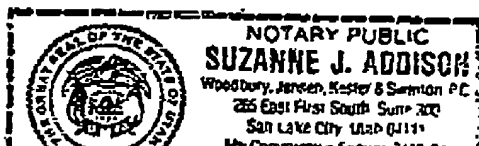
Eric B. DelMar L.S.
 FIRST MIDDLE LAST

State of Utah :

SS.

County of Salt Lake :

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Eric B. DelMar known to me to be the person whose name is subscribed
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Suzanne J. Addison
 Notary Public

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15th day of April, 1994.

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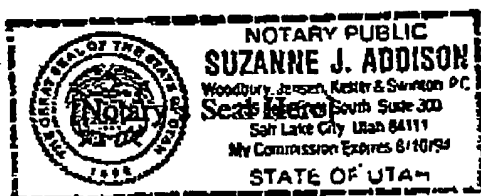
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Suzanne J. Addison
 Notary Public



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REEL 7007 FRAME 70

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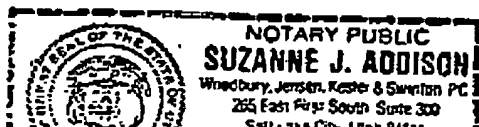
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SS.

County of Salt Lake :

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Scott T. Moe known to me to be the person whose name is subscribed
 to the foregoing Assignment and acknowledged that he executed the same as his free act and
 deed for the purposes therein contained.

Suzanne J. Addison
 Notary Public



IN WITNESS WHEREOF, I hereto set my hand and seal at Salt Lake City, Utah, this
27th day of April, 1994.

Linda D. Artman L.S.
FIRST MIDDLE LAST

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County of Salt Lake :

Before me this 27th day of April, 1994, personally appeared

Linda D. Artman known to me to be the person whose name is subscribed
to the foregoing Assignment and acknowledged that he executed the same as his free act and
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ASSIGNOR: MUELLER, ALAN L. DOC DATE: 04/15/94

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ASSIGNOR: DELMAR, ERIC G. DOC DATE: 04/27/94

ASSIGNOR: BALANDRIN, MANUEL F. DOC DATE: 04/15/94

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ASSIGNOR: ARTMAN, LINDA D. DOC DATE: 04/27/94

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7007/0967 PAGE 0002

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PATENT NUMBER

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Connie J. Keen

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1 Alan L. Mueller 3 Bradford C. VanWagenen
3 Eric G. Delmar 4 Manuel F. Balandrin
5 Scott T. Moe 6 Linda D. Artman

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other

Execution Date: April 15, 22, 27, 1994

2. Name and address of receiving party(ies)

Name: NPS PHARMACEUTICALS, INC.

Internal Address: Salt Lake City UT

Street Address: 420 Chipeta Way

Suite 240

City: Salt Lake City State: UT ZIP: 84108

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s): 08/194,210, filed February 8, 1994

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Richard J. Warburg, Esq.

Internal Address: SAN DIEGO OFFICE

Street Address: 611 West Sixth Street

Suite 3400

City: Los Angeles State: CA ZIP: 90017

6. Total number of applications and patents involved:

7. Total fee (37 CFR 3.41) \$ 40.00

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Signature

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LYON & LYON
611 WEST SIXTH STREET
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ASSIGNOR:
MUELLER, ALAN L.

DOC DATE: 05/18/93

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DIGEST : ASSIGNMENT OF ASSIGNORS INTEREST

ASSIGNEE:
NPS PHARMACEUTICALS, INC.
420 CHIPETA WAY SALT LAKE CITY, UT 84108

SERIAL NUMBER 8-014813 FILING DATE 02/08/93
PATENT NUMBER ISSUE DATE 02/00/00

Margaret Saballe

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RICHARD J. WARBURG, ESQ.
SAN DIEGO OFFICE
611 WEST SIXTH STREET
LOS ANGELES, CA 90017

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ASSIGNOR:

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PATENT NUMBER ISSUE DATE 00/00/00

P. Foster
EXAMINER/PARALEGAL
ASSIGNMENT BRANCH
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1. Name of conveying party(ies):

Alan L. Mueller

2. Name and address of receiving party(ies):

Name: NPS PHARMACEUTICALS, INC.

Internal Address:

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other

Execution Date: May 18, 1993

Street Address: 420 Chipeta Way
Salt Lake City, UT 84108

City: Salt Lake City State: UT ZIP: 84108

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s): 08/014,813, filed February 8, 1993

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No(s).

B. Patent No(s).

Additional numbers attached? ☐ Yes ☒ No

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5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Richard J. Warburg, Esq.

Internal Address: SAN DIEGO OFFICE

Street Address: 611 West Sixth Street

City: Los Angeles State: CA ZIP: 90017

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 341): \$ 40.00

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51.

197/22

ASSIGNMENT

For valuable consideration, I, ... Alan L. Mueller
of Salt Lake City, Utah, hereby assign
to NPS PHARMACEUTICALS, INC., a
Delaware corporation having a place of business
at Salt Lake City, Utah

this assignment including: said application, any and all United States and foreign patents granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and I authorize the Assignee to apply in all countries in my name or in its own name for patents and like rights of exclusion and for inventor's certificates for said inventions and improvements; and I agree for myself and my heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

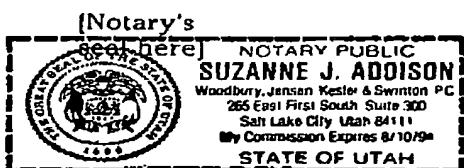
IN WITNESS WHEREOF, I hereto set my hand and seal at Salt Lake City
Utah, this 18th day of May, 1993

STATE OF Utah FIRST Alan MIDDLE INITIAL L. LAST Mueller
COUNTY OF Salt Lake SS.

Before me this 18th day of May, 19 93, personally

.....*Stephanne J. Addison*
Notary Public

My commission expires: 8-10-94



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